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Intended vs. Unintended Consequences:
Evaluating the New Orleans Living Wage Ordinance

ABSTRACT

In February 2002, New Orleans endorsed with a 63 percent majority a ballot initiative to establish a citywide minimum wage one dollar above the federal minimum. We surveyed New Orleans businesses in 1999 to estimate this proposal's costs. We present the main results from this survey. We then evaluate five means through which firms might adjust to cost increases—raising prices, improving productivity, redistribution of firms' income, layoffs/labor displacements, and relocations. Because we find that the cost increases will be small for most firms—i.e. one percent or less of these firms' operating budgets—we conclude that changes in prices, productivity and distribution are the likely primary means through which firms will absorb these costs. We also consider the likely benefits of the measure to some New Orleans businesses through an expenditure multiplier.

1. Introduction

In February 2002, citizens of New Orleans, Louisiana endorsed with a 63 percent majority a ballot initiative that proposes to raise the minimum wage within the city by one dollar above the federal minimum wage. The proposal would mean that all workers in New Orleans, with the exception of those in job categories that are explicitly exempted from the law, would have to be paid at least $6.15 an hour, 19.4 percent above the current national minimum wage of $5.15. The New Orleans law would also mean that workers within the city would get raises each time the federal minimum increased in order for New Orleans workers to maintain its one dollar increment above the federal minimum.

This paper presents the main findings of a longer study we conducted assessing the likely impact of the New Orleans proposal (Pollin, Luce, and Brenner 1999), and considers some broader methodological issues for assessing the viability of such proposals. The cornerstone of our previous study was an extensive survey we conducted in 1999 of New Orleans businesses as to their employment levels, labor costs, and total operating budgets.

The petition prepared by supporters of the proposal to the New Orleans City Council states that the current federal minimum of $5.15 is "insufficient to provide a living wage under conditions existing in the City of New Orleans." This view about the inadequacies of the current national minimum wage is certainly consistent with the basic fact that the national minimum wage has fallen sharply over the past two decades. At its current rate of $5.15/hour, the national minimum wage was, in 2001 dollars, about 37 percent below its peak in 1968 of $8.14, even though the U.S. economy was roughly 80 percent more productive in 2001 than 1968. More to the point, someone who works full-time for 52 weeks at the $5.15 would earn $10,712 over a year. This figure is 12.2 percent below the 2001 national poverty threshold of $12,207 for a family of two (1 adult, 1 child) and a broad range of researchers consider such official poverty thresholds themselves to be between 25 and 50 percent too low.[1] A family of four living on the earnings of two full-time minimum wage workers would still achieve a living standard only 19 percent above the government's stringent official poverty line. Of course, such families are eligible to receive an earned income tax credit, food stamps, and Medicaid. But the need for such programs to support families

which includes full-time workers only emphasizes further the low level to which the national minimum wage has fallen.

The eroding real value of the minimum wage has led to a movement throughout the country for legally mandated "living wage" floors, i.e. minimum wage rates at least high enough to keep workers and their families out of poverty. This movement has been focused primarily at the level of municipalities, but there have also been state-wide initiatives. The first victory of a municipal living wage campaign was in Baltimore in 1994. The ordinance there stipulated that firms that hold service contracts with the city pay a minimum wage that began at $6.10 an hour in 1996 and then rose to $8.20 an hour by 2001. Broadly similar ordinances have since passed in more than 80 other municipalities, and approximately 70 other campaigns in behalf of such measures are ongoing. These are in addition to the state-wide minimum wage measures that surpass the federal minimum in Alaska, California, Connecticut, Delaware, Hawaii, Maine, Massachusetts, Oregon, Rhode Island, Vermont, and Washington.

The proposal in New Orleans is one expression of this broader living wage movement. In terms of its specifics, it is a hybrid between the municipal and state-wide measures. This is because it would be a municipal ordinance, but, corresponding to the various statewide measures, it would cover all workers within the municipality, not only those employed by city contractors.

The primary intended consequence of the proposal is straightforward: to raise living standards for as many as possible of the more than 40 percent of all households in the New Orleans area that are poor or near-poor. At most, however, the proposal is likely to reach no more than about half of the area's low-income households, since only half of these households include members with jobs.

Among those who do have jobs in New Orleans and were paid below $6.15 at the time of our survey, the average hourly wage is $5.50. This means that the average hourly raise for such workers would be 65 cents, which amounts to an annual increase of about $1,100, given that, on average, low-wage workers in New Orleans are employed approximately 1,700 hours per year. For poor families in New Orleans that include employed workers, a $1,100 annual raise would produce a modest but still significant improvement in their living standard. We have estimated that the pretax family income of

such families would increase by roughly 12 percent. After allowing for changes in taxes as well as eligibility for food stamps and the EITC, the net gain for poor families would be between 3 – 4.5 percent.

But a crucial premise underlies these calculations as to the likely benefits of the proposal: that workers now employed in low-wage jobs in New Orleans will retain these same jobs after the living wage ordinance is implemented. But contrary to this premise, economists have long recognized that minimum wage mandates and similar labor market interventions can generate negative unintended consequences. Employment losses for low-wage workers is the unintended consequence that has been most widely recognized and debated in association with minimum wage proposals generally. But in the case of a municipal ordinance such as that proposed for New Orleans, an equally serious potential unintended consequence would be business relocations out of the city to avoid the higher minimum wage requirements.

How significant are these negative unintended consequences of the New Orleans proposal likely to be? As a simple matter of accounting, it is clear that layoffs or business relocations are not the only possible ways New Orleans businesses could respond to an increased municipal minimum wage. Depending on their cost structures and production processes, firms could also absorb the increased costs through three other means: 1) raising prices; 2) raising productivity; or 3) redistributing income within the firm, either through wage compression or a fall in profit shares. The advantage of these three other adjustment mechanisms, relative to layoffs or relocations, is that, within a reasonable range of small adjustments, firms could implement them more quickly and at a lower cost than either layoffs or relocations.[2] Beyond these various adjustment mechanisms, it is also likely that some New Orleans firms could benefit through an expenditure multiplier when the incomes of low-wage workers and their families rise by 3 – 4.5 percent through the ordinance.

Our paper is an effort to establish what are the most likely effects of the New Orleans proposal. Of course, we cannot say with certainty what any such future outcomes will be. As the long-term debate over minimum wage policies make clear, it is difficult enough to reach definitive conclusions about a policy measure already in place. But such difficulties are greater still in attempting to project the impact

of future policies. In the next section of the paper, we report the main results of our survey of New Orleans businesses. In section three, we then draw on these results and other data sources to consider the extent to which firms are likely to absorb these costs through some mix of the five possible responses—price or productivity increases, redistribution within the firm, layoffs or relocations. In section four, we then consider how large an expenditure multiplier is likely to result through this measure. We do not explore further in this paper either the magnitude of the benefits to workers or the distribution of these benefits across family types. Nevertheless, obtaining a clearer understanding as to how businesses are more likely to respond to the ordinance should itself shed light on whether the proposal's intended or unintended consequences are likely to prevail.

2. Estimate of Covered Workers and Firms

Mandated Effects. There were approximately 12,700 business firms in New Orleans in 1999, employing about 293,330 workers during our survey period between January – March 1999. In our survey, we received full responses from 444 firms that, overall, employ 68,751 workers, amounting to 23.4 percent of the entire labor force of New Orleans. We generated estimates for the full city from these survey responses using standard statistical methodologies. Details on our survey methodology, data sources, and calculations are presented in Appendix 1. In Appendix 2, we offer some indicative updated estimates of these cost effects resulting from the fact that the living wage threshold has remained fixed at $6.15 over the three years since we conducted our survey, while inflation and nominal wages have been rising. However, throughout the body of the paper, we present only the results derived from our much more thorough 1999 survey data.

Of the 293,330 workers in the city, we estimate that 77,175 people, amounting to 26.3 percent of the total work force, earn below $6.15 an hour. However, 19,008 were paid below the national minimum of $5.15 at the time of our survey, either through an exemption or noncompliance with the law. We assume these workers would not receive the higher municipal minimum wage.[3] In addition, we estimate that there are 11,117 public sector workers in New Orleans presently earning between $5.15 and $6.14, amounting to nearly 20 percent of the city's workforce within that pay scale. These workers would not be

covered by the living wage proposal in its present form, which would obviously limit the scope of the law considerably. The New Orleans proposal would, however, provide coverage for workers who receive part of their income in tips. The current federal minimum wage sets a minimum of $2.13 for people earning at least $30 a month in tips; the New Orleans proposal would raise the minimum for tipped workers to $3.08. Thus, excluding public sector workers while including tipped workers earning below $3.08 among the covered segment of the New Orleans labor market, we arrive at our estimate that a total of 47,050 workers would be covered by the ordinance.

In Table 1, we present figures as to the number of firms and workers covered as well as our estimates of the labor cost increases that would result from the living wage proposal. As the table shows, of the 47,050 total workers that would be covered by the law, 25,477 (54.1 percent) are full-time workers, 20,341 (43.2 percent) are part-timers, and 1,232 (2.6 percent) are tipped workers earning between $2.13 and $3.08.

TABLE 1 BELONGS HERE

The average wage at present for the workers between $5.15 and $6.14 is $5.50, so the average hourly increase would be 65 cents. On average, these workers are not full time; they work 32.7 hours per week. Assuming these workers are employed 50 weeks a year, that would mean that they will get an annual raise of $1,063.[4] For tipped workers, the average hourly wage is presently $2.39, so the average wage increase would be 69 cents. These workers are employed an average of 23.3 hours per week. If we again assume they are working 50 weeks per year, this would bring their annual wage increase to $804. Adding these figures together, the total wage increase due to the living wage ordinance would be $49.7 million. In addition, the payroll tax that covered businesses will have to pay is 7.65 percent of this wage increase, or $4.4 million. This brings the total mandated costs for all 12,682 firms to $53.5 million, or $4,218 per firm.

Ripple Effects. The ripple effect refers to those wage increases that employers give to employees beyond what is legally mandated. Employers give such ripple effect increases to maintain some measure of pay hierarchy between the lowest-paid workers receiving the mandated increase, and

those earning somewhat above the new minimum. For this New Orleans proposal, there are four categories of likely recipients of such wage increases: 1) employees who, prior to passage of the New Orleans law, were earning between $5.15 - $6.15 and who receive wage increases that puts them above $6.15; 2) employees who are now earning more than $6.15 and who nevertheless receive a raise when the living wage policy becomes law; 3) tipped workers earning above $2.13 but below $3.08 who receive a raise that will put them above $3.08; and 4) tipped workers earning above $3.08 but below $5.15.

Recent research on the ripple effects arising from increases in federal and state minimum wages has consistently found these effects to be relatively weak. For example, we examined the combined state and federal minimum wage increase in California from $4.25 to $5.75 between 1996-98, a 35 percent increase in the statewide minimum (Pollin and Brenner 2000). We found that workers earning between $4.25 - $4.99 in October 1995—i.e. those within 75 cents of the minimum-- received a median nominal wage increase of 51 percent by September 1998. The increase by September 1998 for those earning between $5.00 - $5.75 in October 1995 was 25 percent less than that for the minimum wage category. Those earning between $5.75 – $7.24 in September 1995 received wage increases roughly one-third that for the minimum wage category. These results are in line with other studies of the same California experience (Reich and Hall 2000) and similar experiences in other states (summarized in Card and Krueger 1995).

Because the ripple-effect raises are non-mandated, any estimate of their size is inherently more speculative than the figures we have calculated for the mandated increases to $6.15. Nevertheless, the basic ripple-effect patterns described in the literature provide guidance for calculating an order of magnitude figure. Our approach to generating this order of magnitude estimate is to construct a sliding scale of wage increases for workers currently earning up to $7.14 an hour, i.e. one dollar over the New Orleans mandated increase. The scale begins with a 50 cent band between the current $5.15 minimum wage and $5.64. On average, those workers earned $5.33 in 1999, so that raising them all to the $6.15 living wage minimum will mean an average raise of 16 percent.

Based on this 16 percent raise for the lowest-paid wages-only workers, we then assumed a sliding scale of wage increases for workers in three other wage categories. We assume wage increases are 8 percent for workers currently earning between $5.65-$6.14; 4 percent for those earning between $6.15 and $6.64; and finally, 2 percent for those earning between $6.65 and $7.14. As we show in Table 1, these effects would cover 27,314 workers, a full 58 percent of the 47,050 who receive mandated raises. We calculate that the total set of ripple effect labor cost increases will be $17.9 million, including 7.65 percent in payroll taxes on $16.6 million in wage increases.

Living Wage Costs Relative to Firms' Total Operating Costs.

As Table 1 shows, adding up mandated and ripple effect costs brings our estimate of total costs to $71.4 million, or, on average, $5,630 for the 12,682 firms. Even more pertinent are the total living wage cost figures relative to the firms' overall operating costs. As we report at the bottom of Table 1, the direct mandated costs of the living wage ordinance will amount, on average, to 0.7 percent of the covered firms' operating costs. If we add our estimated ripple effect wage increases, this brings the average total costs of the living wage ordinance to 0.9 percent of firms operating costs.[5]

This overall cost ratio is a crucial first benchmark for evaluating the impact of the ordinance on New Orleans firms. Clearly, however, we need to examine not just an average figure for cost impacts, but the cost effects on different types of firms. We therefore now consider cost ratio figures according to firm size and industry.

Distinctions by Size

Table 2 shows our estimates of living wage cost/operating budget ratios by firm size. The clear pattern here is that the largest impact will be on medium-sized firms, i.e. firms with between 50-499 employees. For these firms, the living wage costs will entail a roughly one percent increase in their operating budgets. Smaller firms will be affected to a much lesser extent. For firms employing between 1-24 workers, the living wage bill will amount to 0.5 percent of their operating budget. The ratios are only slightly higher for firms that employ up to 49 workers. With the largest firms, employing more than 500 workers, the ratio falls back to 0.5 percent. A widespread perception exists that changes in minimum

wage laws have the greatest impact on the costs of small businesses. Our results in Table 2 show that, at least in New Orleans, this is not the case.

TABLE 2 BELONGS HERE

These results for small businesses help explain the findings of a 1998 nationwide survey conducted at the Jerome Levy Economics Institute on the attitudes of small business owners to increases in the minimum wage (Levin-Waldman 1999).[6] The survey found that a large majority of small businesses did not make significant adjustments due to the 1997 national minimum wage increase, and would not anticipate doing so if the national minimum wage went to $6.00 an hour. More specifically, only 6.6 percent of all small businesses changed their hiring or employment practices at all after the 1997 increase. Of these, only 10.8 percent indicated that they had laid off workers—in other words, a total of only 0.7 percent of small businesses in the sample laid off workers due to the 1997 minimum wage increase. This absence of any significant adjustments by small businesses in their employment practices after the 1997 minimum wage increase is certainly consistent with our New Orleans survey figures showing that small businesses would be affected by a less than disproportionate degree by the living wage measure.

Distinctions between Industries

Industry Groupings. Table 3 presents data on living wage costs relative to operating budgets based on 2-digit Standard Industrial Classification (SIC) groupings. The table lists the industrial groups according to the living wage cost/operating budget ratio, starting with the industries with the highest ratios. In columns 3 and 4, the table then presents information on the size of the industry within the New Orleans economy. We measure industry size according to two dimensions: its share of total output and total employment. The table reports data only on industries where either total output or employment exceeds one percent of the New Orleans total.

TABLE 3 BELONGS HERE

As the table shows, only the eating and drinking industry—i.e. restaurants, cafes and bars—would experience a cost increase greater than two percent of their operating budget, and even here, the

cost increase is just above two percent. The hotel industry would be the next most heavily affected, with cost increases at 1.7 percent of operating budgets. These two industries are responsible for about 6 percent of all production in New Orleans and almost 10 percent of all employment. Beyond these, three additional industries--business services, food stores and wholesale trade--would face a cost increase greater than one percent of operating budgets. Together, these three industries account for another 8.2 percent of production and 11.4 percent of employment in New Orleans. Taking account of all the rest of businesses in New Orleans, our results show that industries accounting for 86 percent of production and 79 percent of employment in New Orleans would face cost increases of less than one percent due to the living wage ordinance.

3. Alternative Adjustment Responses to Increased Labor Costs

As we have said, New Orleans firms will respond to the cost increases imposed by the living wage ordinance through some combination of 1) raising prices; 2) raising productivity; 3) redistribution within the firm; 4) layoffs; or 5) relocations. At least initially, some combination of the price, productivity, and distributional adjustments is likely to be the primary channels through which New Orleans firms adjust to the ordinance, since they can be accomplished more readily and at lower costs than either laying off workers or relocating. Once we have assessed how significant these adjustment processes are likely to be, we will then be in a better position to evaluate concerns about layoffs or business relocations stemming from the ordinance.

Price Effects

The adjustment process that would be least costly and disruptive for firms would be to simply raise prices to reflect their increased costs. But whether firms can succeed in such a strategy depends on the competitive environment in which they operate and the price elasticity of demand for their products.

As part of their path breaking work on minimum wages, Card and Krueger (1995) concluded through observing a variety of situations that price increases were a primary means through which firms' absorbed their increased costs resulting from a higher minimum wage. Indeed they concluded that the New Jersey fast-food outlets were able to raise their prices by about the same amount as their total costs

were increased, which amounted to about 3.4 percent. This conclusion is especially notable for our purposes since the average cost increase/operating budget ratio for the four fast-food restaurants in our New Orleans survey was 3.9 percent—thus corresponding closely to the price mark-ups observed by Card and Krueger for New Jersey.

But these results are based primarily on how increases in either a statewide or national minimum wage will affect fast-food restaurant prices only. How well can these results be generalized to the range of businesses in New Orleans that would be covered by a municipal living wage ordinance? Of course, all firms operating in New Orleans will face the same new minimum wage laws. But firms that compete with other firms in New Orleans will likely be better able to raise their prices, since their competitors will have experienced similar mandatory cost increases. Businesses that compete in markets that extend beyond New Orleans will correspondingly have more difficulty marking up their prices.

In Table 4, we divide up industries in New Orleans according to whether they compete primarily either with firms outside or inside New Orleans, or whether they face some combination of competitors both inside and outside the city. The central issue in dividing up the industries is whether a major element of what a business sells in product markets is its location within New Orleans proper.[7] We discuss these divisions below, with detailed considerations relating to the hotel industry and food stores. The data presented for each industry are simply the same living wage/operating budget ratios reported in Table 4.

TABLE 4 BELONGS HERE

Industries Competing Outside of New Orleans. These firms are going to be placed at a disadvantage relative to their competitors outside New Orleans, since they alone will face an increase in their labor costs. Thus, if everything else remained equal in their industry, New Orleans firms would not be able to pass along their cost increases through raising their prices, without risking a loss of their customer base to their out-of-town competitors. However, the cost increases faced by these industries are negligible, as we see in Table 4--0.5 percent for manufacturing, 0.1 percent for legal services, and effectively no cost increase in mining. As such, we can assume that these firms will have to make

essentially no adjustments in their prices, and should therefore face no competitive disadvantage due to a New Orleans living wage ordinance.

Industries Competing Within New Orleans. For firms competing mainly within New Orleans, it is likely that the situation will approximate that analyzed by Card and Kreuger and others for the fast-food industry. That is, these firms should be able to raise their prices to reflect their higher costs, since all the firms in the market will face similar cost increases. As shown in Table 4, we have assigned five industries to this category--the eating and drinking industry, facing a 2.2 percent cost increase; hotels, with a 1.7 percent cost increase; and the personal services, transportation, and construction industries, all of which would experience cost increases below one percent. These figures indicate that the hotel and restaurant industries would need to mark up their prices by about 2 percent to cover their additional costs, while personal service and perhaps transportation firms would seek price increases in the range of one percent. Given that the size of all these price mark-ups are still small, they are not likely to have a substantial impact on the demand for their products, through, for example, New Orleans residents eating in restaurants less frequently or visitors to the city staying with friends in private homes rather than hotels.

Some data on segmentation in the hotel industry in the New Orleans area will be useful in illustrating this point. We draw here on industry data compiled by HRG & Torto Wheaton Research (HRG hereafter; 2002) that distinguishes three distinct submarkets in the New Orleans area. We will compare two of these—the Central City submarket and the Metairie/Airport submarket. The Central City submarket consists of "hotels located in the Central Business District of downtown west of Iberville Street. Also included in this submarket are hotels near the Convention Center and in the Garden District." The second submarket we will consider is what the HRG study calls the Metairie/Airport submarket, which consists of hotels located west of New Orleans along the Interstate 10 corridor. These hotels are outside of the city proper, and therefore would not be covered by the living wage ordinance.[8]

The distinctions between these market segments is evident from the figures on average prices and revenues per available room shown in Table 5. As we see, for the full service market prices on average,

were 97.2 percent higher in the Central City hotels and the revenue per available room—that is the total revenues received by the hotel divided by the total number of its available rooms, including both vacant as well as occupied rooms—was 47 percent higher. For the limited service hotels, prices and revenues were both slightly more than 50 percent higher in the Central City submarket.

TABLE 5 BELONGS HERE

It is clear from these figures that hotel customers pay a very high premium for staying in the Central City area relative to the Metairie area. This suggests that the differences between the two markets would not change in any significant way if the Central City hotels raised their prices by 1– 2 percent to cover their additional labor costs resulting from the living wage ordinance. Such a cost increase would mean that, for the full-service hotels, those in the Central City would now be about 98 – 99 percent rather than 97 percent more expensive than those in Metairie. With the limited service hotels, the differential would rise to 53 – 54 percent rather than 52 percent.

In short, this evidence on prices and revenues per available room for New Orleans hotels supports the idea that a price increase for hotel rooms on the order of 1-2 percent for the Central City area should not have a significant influence on the competitiveness of these hotels in the regional hotel market. This in turn suggests that, at least for this one case of the hotel industry in New Orleans, small price increases are one viable means through which firms can adjust to the cost increases resulting from the living wage ordinance. [9]

Industries Competing Both Inside and Outside New Orleans

Industries in this broad category are very heterogeneous, as, indeed, are many of the firm types within each industry category. For example, business services includes both advertising and building maintenance firms. Wholesale trade includes both durable and non-durable goods. For some of these businesses, such as janitorial firms or fresh-food wholesalers, proximity to their customers is important. As such, the main competitors for these firms are likely to be within New Orleans. By contrast, neither advertising firms nor wholesalers selling durable goods would likely face only local competitors. Given these differences, it is difficult to generalize as to how industries and firms in this category would react to

a city-wide minimum wage increase. Still, of the eight industries listed in this category in Table 4, only three--business services, food stores, and wholesale trade--have living wage cost/operating budget ratios greater than 0.8 percent. Let us therefore consider these three industries in more detail.

Business Services and Wholesale Trade. The firms in both of these categories, such as non-durable goods or building maintenance, that compete in local markets should be able to mark up their prices without significantly affecting their customer base, as with the other industries operating in the local market. The more difficult problems emerge with the businesses facing competitors outside New Orleans, such as advertising firms or durable goods distributors. For these firms, much, if not all of the average 1.5 percent cost increase may well be difficult to pass along to customers. For these firms, the other adjustment mechanisms should be especially important.

Food Stores. Food stores in New Orleans, as in other large cities, operate in very different markets, depending on whether they are located in poor or non-poor neighborhoods. In non-poor neighborhoods, the customers of these stores typically have cars, and thus the ability to drive outside the city to avoid paying higher food prices. For stores operating in these markets in New Orleans, these stores may have some difficulty in maintaining their marked-up prices.

However, counteracting this factor is that in most middle-class neighborhoods, price is rarely the sole determining factor around which food shopping decisions are made. Convenience and quality are at least equally important factors in attracting middle-class food shoppers.[10] Heavily discounted food stores already exist on the outskirts of all major metropolitan areas. These discount stores have not driven customers away from the higher quality but more expensive stores. Overall then, stores in these neighborhoods probably will be able to pass on to customers some share of their higher costs. They will then absorb the rest of their higher costs through some combination of the other adjustment mechanisms.

The situation will be different for food stores in poor neighborhoods. This is because customers in poor neighborhoods are not generally able to travel significant distances to find cheaper food prices. We therefore expect that, everything else equal, food stores in poor neighborhoods will be able to mark up their prices by an amount roughly comparable to the 1.5 percent increase in costs.[11]

This then raises another issue: how much would a 1.5 percent increase in food prices in poor neighborhoods affect the living standards of the poor? Would such an increase in food prices constitute another unintended consequence of a living wage policy? This will depend, first of all, on what percentage of a family's food budget is covered by food stamps. If we were to assume that food stamps completely covered a family's food budget, then the increase in food prices would have no effect on the family's standard of living.

But, in fact, food stamps will not cover a family's entire food budget. Probably about 70 percent of eligible families in Louisiana make use of the food stamp program.[12] For those that do utilize the program, coverage varies according to a family's needs. As a rough average figure, food stamps would likely cover 50 percent of a poor family's food budget. If we also accept the official government estimate that spending on food constitutes about one-third of a poor family's overall budget, this implies that a 1.5 percent increase in food prices would mean an increase in the cost of living for poor people of between 0.25 (for those receiving food stamps) and 0.5 percent (those without food stamps).[13]

How serious this problem would be depends, in turn, on whether the poor family includes a working member. For the roughly 50 percent of poor families in New Orleans that do include a working member, a 0.25 – 0.5 percent increase in living costs would be counterbalanced by the roughly 3 – 4 percent increase in disposable family income due to the minimum wage increase. Thus, even after allowing for a full mark-up of food prices commensurate with the minimum wage increases, and with no additional support through food stamps, the net effect of the minimum wage raise would still bring roughly a 3 percent average increase in disposable income.

That will not be the case for most of the poor families in which no member is employed; that is, depending on the threshold one chooses, between about 50-60 percent of the poor households in New Orleans. If they also do not receive food stamps, they will face a 0.25 – 0.5 percent increase in their living costs that will not be counterbalanced by an increase in family income. Such families would be hurt by the minimum wage increase, though only by a small amount, if nothing else were to change in their lives.

Productivity

New Orleans firms would likely experience at least modest increases in productivity through efficiency wage effects—i.e. increased worker effort, lower turnover and absenteeism, and, following these, lower costs of recruitment, training and supervision. The citywide minimum wage pay raise should encourage these effects through two channels. Both the absolute pay raise itself, and the increase in pay *relative* to uncovered workers employed outside the city limits, should encourage increased job commitment.

This is likely to be especially important for the hotel and restaurant industries, which, as we have seen, would experience the highest relative cost increases through the New Orleans proposal. Research measuring turnover rates and the costs of turnover is limited. But the evidence available does strongly suggest that turnover rates are generally quite high in both industries, albeit with wide variations between firms. Our own employer survey of hotels and restaurants in Santa Monica, California found that average turnover rates for both hotels and restaurants were in the range of 50 percent per year. Average costs of replacing workers ranged between about $500 - $700. Previous industry studies are broadly consistent with our finding that turnover costs are significant (e.g. Fernsten and Croffoot 1986, Worcester 1999). This is not to suggest that the efficiency wage gains are likely to match the covered firms' increased costs. However, given that, for most firms, these cost increases relative to total operating budgets themselves will be small suggests that the efficiency wage gains could absorb some significant fraction of the cost increase.

Redistribution

As we have mentioned, minimum wage increases could induce two types of downward redistribution: wage compression between lower and higher paid workers, and a reduction in the profit share. We have already built into our overall estimates a considerable degree of wage compression through assuming a weak ripple effect. Any decline in the profit share will of course be resisted by business owners. But the extent of their resistance will be tempered by firms' capacity for productivity

growth, since productivity growth allows for a rising absolute level of profit even when the profit share is declining.

Consider, for example, the situation for the average firm in New Orleans, for which the living wage cost increase/operating budget ratio is roughly one percent. It is reasonable to assume that the average firm is also likely to improve its productivity each year by at least one percent, without even taking into account possible efficiency-wage induced productivity gains. In this situation, the one percent productivity gain would mean that low-wage workers could get their raise, and all other operating costs could be covered equally, without anyone else at the firm experiencing a cut in the real level of their wages or profits. Of course, the benefits from the year's worth of productivity growth would accrue entirely to the low-wage workers. But by the same token, all gains from productivity growth in subsequent years could revert back to higher paid workers and owners while low-wage workers would still be earning the higher mandated minimum rate.

In fact, some variation on this scenario does appear to actually happen, as research shows that, in the initial period after a higher minimum wage is implemented, wage gaps do tend to return to their previous level (this research is summarized in Spriggs and Klein 1994). Overall then, because the average increase in firms' operating costs due to the New Orleans living wage ordinance would be only one percent, it is not hard to envision scenarios in which a redistribution of the firms' income could realistically cover a significant share of the wage gains for low-wage workers.

Employment Effects

The proposed increase in the New Orleans minimum wage relative to the national minimum, at 19.4 percent, is virtually identical to the 18.8 percent increase in New Jersey's statewide minimum in 1992. It is therefore reasonable to draw from studies of the New Jersey experience (most recently Card and Krueger 2000; Neumark and Wascher 2000) that there is likely to be little, if any, employment losses in New Orleans resulting from the proposed citywide minimum wage increase. Indeed, if anything, we would expect the impact of the New Orleans increase to be significantly less than that observed by those studying New Jersey. This is because both of these studies examined fast-food restaurants only. For the

fast-food industry in New Orleans, our survey results suggest that the living wage cost increase/operating budget ratio is just below 4 percent—i.e. about four times higher than the average ratio for all New Orleans firms.

The other possible effect on employment policies would be through labor substitution—i.e. firms replacing their existing minimum wage employees with workers having better credentials, which could occur even in the absence of any net job losses. Because the jobs in New Orleans would pay higher than comparable positions outside the city limits, openings for the covered New Orleans jobs would likely attract workers with somewhat better credentials, on average, than those in the existing labor pool. In order to roughly gauge how extensive such labor substitution is likely to be, we first consider in Table 6 the differences in personal characteristics for two groups of wage workers—those earning between $5.15 - $5.64 and $6.15 - $6.64 in 1999. Our sample is drawn from a pooled sample of five southern states in the Current Population Survey, since both the New Orleans and Louisiana samples are themselves too small to provide reliable results.

It is important to emphasize that these figures are useful only in establishing *an extreme outer limit* as to the likely degree of labor substitution. This is because, in considering these figures, we are effectively asking whether, if covered New Orleans firms were newly hiring their entire low-wage work force, and if they were advertising their job openings at a wage rate in the range of $6.15 rather than $5.15, how would the profile change of the newly hired workers?

TABLE 6 BELONGS HERE

As we see from the table, the percentage of those without high school diplomas falls by 15.8 percentage points in moving from the $5.15 to the $6.15 wage category. Correspondingly, those with high school diplomas, some college, and college degrees each rise by between 4.5 – 6.5 percentage points. Not surprisingly, the percentage of teenagers falls by 18.8 percentage points in moving from the lower to the higher wage category. The $6.15 wage category has fewer females but, surprisingly, more non-native English speakers.

Having thus defined the outer limit of labor substitution effects through these figures, the next step here is to recognize why any actual labor substitution effects are likely to be far more modest. This is first of all because, in reality, businesses are unlikely to newly hire their entire workforce after a higher municipal minimum wage were enacted, nor would they want to do so. Rather, as we have discussed, workers earning the higher minimum will be less inclined to leave their jobs, and their work effort should correspondingly rise. By the same token, businesses are not likely to terminate their existing workers, even if they have relatively poor formal credentials, as long as their performance is satisfactory. This is especially true since, for virtually all jobs covered in the minimum wage range, the qualities that would distinguish one worker from another will not be based primarily on formal qualifications. More effective workers are rather those that simply exert more effort, and this employers can discern only through observation.

Another reason the Table 6 figures represent an outer limit measure of the substitution effect is that the minimum $5.15 category includes a relatively high proportion of teenagers who do not have high school diplomas simply because they are still in high school. If $6.15 became the new minimum wage for New Orleans, then the proportion of high school students would rise in this new minimum category, thereby also increasing the total share of those in this category with less than a high school diploma.

Recognizing these various factors, we would still expect some substitution to occur, both by educational credentials and age, though, again, the magnitude of such substitutions is likely to be modest.

Business Relocations

As we have seen, the cost increase due to the living wage ordinance for the average firm in New Orleans would be 0.9 percent of its operating budgets. It is reasonable to assume that for firms whose cost increase ratio is around this average or lower, the incentive to relocate would be weak. But even for many firms whose operating budget increases are somewhat larger, it would still not follow that relocation is a viable option. For example, as we have seen, restaurants and hotels are the two business types that would face the highest proportional cost increases, at 2.2 and 1.7 percent respectively of their operating budgets. But the customer base for these businesses is location specific. This is why, for such

firms, some combination of price mark-ups, productivity increases, or income share redistributions are far more efficient adjustment mechanisms than relocation.

Which firm types might have a stronger incentive to relocate? They would have two basic characteristics: their customer base is not specifically tied to New Orleans; and they would face a significant increase in their operating costs through a rise in the city's minimum wage. To help identify how many such firms are in New Orleans, in Table 7, we provide a distribution of all 12,682 private sector firms according to their living wage cost/operating budget ratios. As we see, 26.5 percent of firms employ no low-wage workers. Another 71.8 percent, which do employ low-wage workers, average a cost increase of 0.7 percent of their operating budget. That leaves 209 firms, 1.7 percent of the total, which would have increased cost ratios of over five percent, the average cost increase ratio for these firms being 6.6 percent. Let us allow that all the firms with cost ratios of five percent or above would at least seriously consider relocating to avoid the increased living wage costs. But whether such a move would be viable for any given firm would depend on the nature of its business. As we see in the lower panel of Table 7, these 209 firms are distributed fairly evenly across four industry categories, these being "other services," as well as wholesale trade, business services and retail trade other than restaurants and hotels.

TABLE 7 BELONGS HERE

Of these, it should be most feasible for the wholesale trading firms to relocate, since their business is not tied to a specific location. At the same time, if proximity to customers is important to these firms, moving could then threaten their customer base. Moving would also add to their transportation costs. Retail businesses could move, but may then risk losing customers whose purchasing habits are at least partially tied to convenience. Some business service firms, such as advertising agencies, could move without losing customers. But those with a high concentration of low-wage workers, such as security guard companies, would have to pay the living wage to workers whose jobs were located within New Orleans, regardless of where the firm’s offices were located. In such cases, firms cannot avoid paying the higher New Orleans minimum wage by relocating. Finally, "other services" obviously encompasses a broad spectrum of firms, including those engaged in services like

repair shops, movie theaters, and parking lots. Here as well, some firms may be mobile, while others are not.

As an exercise, let us allow that 100 of the 209 firms whose living wage cost/operating budget ratios are five percent or above did actually relocate out of New Orleans. What would be the impact on the city and state's economy if these firms did depart?

First, we are assuming that these firms would leave New Orleans strictly to avoid paying the higher minimum wage. As such, we would expect that these firms would move just outside the city limits, so as to retain, if from a different specific location within the metropolitan area, their New Orleans-based operations and customer base. One crucial implication of this point is that no net employment losses would occur due to these firms' relocation. Workers would be able to retain their jobs without moving, which in turn would mean no change in the city's housing market.

The primary loss to the New Orleans economy would therefore be the loss of the city's authority to tax these firms. This authority basically amounts to a five percent sales and use tax. But because we are assuming that firms would move just outside the city limits, the State of Louisiana would not lose its four percent sales/use tax revenue. According to our rough estimates, the total loss of tax revenue to the City would be about $2 million if the 100 firms did relocate.[14] This is a large absolute cost, and it may somewhat underestimate the total costs to the city of relocation, since we have not attempted to incorporate any calculation as to how the departure of 100 firms might also affect the business prospects of their neighboring firms. At the same time, to put this figure in perspective, it is equal to 0.4 percent of the city's $499.1 million approved budget for 1999.

4. Benefits to Business: Multiplier Effects

The living wage ordinance in New Orleans will not only produce costs to businesses. It will also produce benefits via multiplier effects, as low-income households spend their additional 3 – 4.5 percent of disposable income. At the same time, this multiplier effect is not equivalent to one induced by the federal government implementing expansionary macroeconomic policies, in which the injection of additional purchasing power results from increased federal borrowing or a fall in interest rates. For this case and

similar measures, the increase in purchasing power for low-income households comes via a redistribution of income—primarily away from consumers in the city, when they pay slightly higher prices for some of their purchases, but also away from business owners and more highly-paid employees, who would receive a somewhat smaller share of the overall income flowing to business firms to accommodate the living wage increases.

As such, the multiplier effects for the New Orleans measure would result primarily through changes in spending patterns within the city, even while spending overall in the city will not significantly change. In particular, retail firms that operate in lower-income neighborhoods in New Orleans should enjoy an increase in their business. Correspondingly, retail firms in the more affluent neighborhoods might experience a slight decrease in the *growth of spending*.[15] But precisely because so much more money is spent in the affluent neighborhoods, this slight decline in the growth of spending will not be noticed.

How significant will be the spending increase in the lower-income neighborhoods? We provide details on our estimation method in Appendix 3. Our major results are as follows.

Working from the overall figure for workers who would get either mandated or ripple effect raises through the proposed ordinance, we have estimated the number of these workers who live in the lower income neighborhoods in New Orleans.[16] These neighborhoods are in the Uptown, Midtown, and eastern Downtown sections of the city. They include, among others, the Central City/Magnolia area, and the St. Thomas, Iberville and Fischer projects. Overall, the population in these neighborhoods comprise 33.6 percent of the total population of New Orleans.

According to our estimates, about 40 percent of the workers getting living-wage increases live in these neighborhoods. Overall, they would bring about $20 million in extra disposable income into their neighborhoods.[17] Of course, they wouldn't spend all $20 million in the neighborhoods in which they live. According to our estimates, the amount they would spend would bring about an additional 2.7 percent in sales, on average, to the retail businesses in these neighborhoods.

Such a boost in sales for neighborhood retail businesses is a small but still significant benefit. It is an amount larger than the average growth rate of national Gross Domestic Product or Louisiana's Gross State Product between 1990 – 1999. That means that, with a 2.7 percent increase in sales, the retail businesses in low income neighborhoods would effectively jump more than one year ahead of a normal pace of sales growth. We would finally note that this benefit to the retail stores might also reduce the pressure these businesses face to raise product prices commensurate with their living wage costs. This effect, in turn, could serve to diminish the small welfare losses to poor families which do not include employed workers that we identified earlier—i.e. the fact that these families will have to purchase food at slightly higher prices while not being able to offset these higher prices with the living wage increase.

5. Conclusion

Our results suggest that the New Orleans firms should be able to absorb most, if not all, the increased costs of the proposed living wage ordinance through some combination of price and productivity increases or redistribution within the firm. This result flows most basically from the main finding of our survey research: that living wage cost increases will amount to about 0.9 percent of operating budgets for average firms in New Orleans, and no more than 2.2 percent of operating budgets for the city's restaurant industry, which is the industry with the highest average cost increase. This then also suggests that the incentive for covered firms to lay off low-wage employees or relocate outside the New Orleans city limits should be correspondingly weak. It is likely, however, that some displacement of the least well-credentialed workers will occur as a result of the ordinance, though again, this effect should also be relatively modest. Similarly, a relatively small number of New Orleans firms will likely relocate, generating a loss of municipal tax revenues on the order of 0.5 percent of the City's budget. Generally though, the process through which New Orleans firms adjust to the living wage ordinance is likely to be relatively mild, as the overall $71 million burden in increased wages and payroll taxes will be broadly diffused among the city's 12,700 firms as well as the city government.

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Appendix 1.
Sampling Procedures and Cost Estimating Techniques

Description of sampling procedures

A sampling frame was constructed from the Yellow Pages USA Deluxe, 1999 Edition – a directory of businesses available on CD-ROM, available from InfoUSA. The frame was checked against a business directory from the New Orleans Chamber of Commerce. The final frame has 14,095 records.

In the first stage, 21 firms were selected for the pre-test. Firms were stratified by size, according to 5 employment categories available on the CD-ROM: 1 to 99 employees, 100 to 249 employees, 250 to 499 employees, 500 ore more employees, and employee size not available. For the pre-test, 5 firms were selected randomly from the 1 to 99 employees category, and 4 firms were selected randomly from each of the other categories.

For the phone survey, 1800 firms were selected according to the following method. Firms not selected for the pre-sample were stratified by industry and employment category. The number of firms in each category can be seen in Table A1. A sample was then drawn, oversampling large firms and firms in industries with large numbers of low-wage workers (based on the Current Population Survey Outgoing Rotation Group file). Those industries that were oversampled are in the retail sector (SICs 52-59), and in services (especially SICs 70, 72, 84 and 88). The number of firms selected in each category can be seen in Table A2. As the table shows, while, formally speaking, we did oversample large firms, that still meant that 1,514 of the 1,800 firms in the sample—i.e. 84 percent of the total number of firms in the sample—had fewer than 100 employees.

Table A1. Distribution of firms in sampling frame, by employment size and industry

	1 to 99	100 to 249	250 to 499	500 +	Unspecified	Total
Agriculture	69	0	1	0	0	70
Mining	81	3	3	5	2	94
Construction	286	4	2	0	0	292
Manufacturing	419	16	6	4	1	446
Transportation and communications	447	21	6	9	3	486
Wholesale trade	552	11	2	1	2	568
Retail trade	3,085	45	8	2	0	3,140
Finance, insurance and real estate	833	8	0	4	3	848
Services	7,435	64	23	27	5	7,554
Government	241	14	3	4	131	393
Unclassified	55	0	0	0	149	204
Total	13,503	186	54	56	296	14,095

Table A2. Distribution of firms in sample, by employment size and industry

	1 to 99	100 to 249	250 to 499	500 +	Unspecified	Total
Agriculture	9	0	1	0	0	10
Mining	3	1	2	3	1	10
Construction	25	3	2	0	0	30
Manufacturing	33	14	6	3	1	57
Transportation and communications	30	10	4	9	2	55
Wholesale trade	54	10	2	1	1	68
Retail trade	403	45	7	1	0	456
Finance, insurance and real estate	75	5	0	4	1	85
Services	870	63	23	25	5	986
Government	7	9	3	4	9	32
Unclassified	5	0	0	0	6	11
Total	1,514	160	50	50	26	1,800

First-stage pre-screening calls

We then screened all of the 1800 firms in December 1998 and January 1999. Each firm was contacted by phone to confirm that the phone number was correct and that the business was located in the city of New Orleans, and to obtain the name of a contact person to whom we could send the questionnaire. 679 firms were eliminated from the sample through the pre-screening process, leaving a total of 1123 "good numbers." The majority of numbers that were discarded were firms that could not be reached after five or more calls, at different days of the week and times of the day. Table A3 provides the other results of the pre-screening calls.

Table A3. Results of pre-screening calls

Good numbers	1,123
Refused to participate	111
Not in New Orleans	53
Wrong number/disconnected	224
Duplicate business	36
No employees	15
Could not reach after 5 or more calls	240

Mailing questionnaire

After firms were pre-screened, questionnaires were mailed to the firm contact person, along with a letter describing the project. Phone callers then called the contact person a few days after the letter was received, and attempted to complete the survey with the respondent over the phone or set up an appointment for a time to call back. Respondents were reminded that the data provided would remain confidential, and that participation in the survey was voluntary.

Phone calls were made from January through the first week of March, 1999. At the end of the period, another 46 firms were discarded for reasons such as being duplicates that were not caught the first time, or the firm having gone out of business since the initial screening. 451 surveys were completed, with 444 of those providing complete employment data. Table A4 provides the full results of the phone calling stage.

Table A4. Results of survey

Completed survey	451
Refused to participate	286
No employees	14
Wrong number/disconnected	10
Duplicate business	22
Other reasons for non-participation	15
Could not complete before end of survey	325

Thus, the completion rate is 40.1 percent. Table A5 provides these numbers.

Table A5. Response rates

Total in initial sample	1,800
Good names after pre-screening	1,123
Good names after second call	1,077
Completed surveys	451
Refused to participate	286
Completion rate (=451/1077)	40.1%
Response rate (=451/791)	61.2%

Weighting

Once the data were collected, firm weights were constructed in order to adjust the results for probability of selection and response rate. The final base weight used in most calculations was calculated by strata as:

$$WEIGHT = [\ 1 / (PS * PN)\ ] * RR$$

where:
PS = probability of being selected into the first sample (n = 1800)
PN = probability of being named a "good number" out of the pre-screening and phone calling (n = 1077)
RR = number of firms for which surveys were completed

Calculations for Cost Tables

Data sources used

Cost calculations were based on the 1999 PERI survey and the Current Population Survey Outgoing Rotation Group (CPS-ORG) files. Because the sample size of wage-earners in New Orleans is not large enough to provide reliable industry and occupation level data, we aggregated the CPS-ORG data for all southern metropolitan statistical areas that had average hourly wages within one dollar above or below the average hourly wage in New Orleans.

Calculations

1. Number of workers affected.

The number of full-time and part-time workers receiving between $5.15 and $6.14 per hour was taken from the PERI survey. The number of tipped workers covered by the ordinance was calculated from the CPS-ORG data for southern cities. We took the percentage of workers who earn between $2.13 per hour (the current minimum

wage for tipped workers) and $3.08 per hour (the new minimum wage for tipped workers), who have occupational category codes between 433 and 444, to determine the number of workers in this wage category who would receive a wage increase. As the tables below show, almost 60 percent of workers in the $2.13-$3.08 category are in tipped occupational categories.

Occupational code and title	Percent of all workers between $2.13 and $3.08 per hour
435 Waiters and waitresses	40.0
436 Cooks	2.6
443 Waiters'/waitresses' assistants	17.0
Total	59.6

2. Cost of wage increase.

The cost of the wage increase was calculated using the PERI survey and the CPS ORG data. CPS ORG data was used to calculate the average hourly wage in each wage category, which was used to determine the average hourly raise each worker would receive. CPS-ORG data was also used to calculate the average hours worked per week for affected wage categories.

3. Ripple effects.

Ripple effects were calculated by dividing the affected workers into the wage categories described in Section 2 of the main text, using the CPS-ORG file to obtain the distribution of low-wage workers. Wage increases were assigned according to the general findings of ripple effect research, which assume that workers in successive wage categories receiving a declining percentage raise.

Ripple effects were calculated for tipped workers in the same way, using the same assumptions listed above: only those workers in tipped occupations were considered eligible for ripple effect increases. Only 16.3 percent of workers in the $3.09 to $5.14 category are in these occupations, as shown below.

	Percent of all workers between $3.09 and $5.14
434 Bartenders	.6
435 Waiters and waitresses	3.1
436 Cooks	4.6
438 Food counter, fountain and related occupations	2.0
439 Kitchen workers, food preparation	1.6
443 Waiters'/waitresses' assistants	1.8
444 Miscellaneous food preparation occupations	2.6
Total	16.3

Appendix 2.
The Effects on New Orleans Business Costs of Labor Market Changes
Since the July 1999 Survey

Because it would not be practical to re-survey New Orleans business firms, we have relied on a combination of data from publicly available sources – primarily the Bureau of Labor Statistic's Current Population Survey – and our original survey to assess changes in the New Orleans labor market over the past three years. We use this combination of data to re-estimate the overall cost effects of the living wage ordinance.

We report the main results of our re-estimation in Table A6. Column 2 of Table A6 repeats the main findings presented in the body of this paper. Column 3 then shows our current estimates of the same data categories.

We find that two key changes took place in the New Orleans labor market over the period we are considering. The first is that the total number of workers that would be covered by the living wage initiative has fallen, from 47,050 to 29,924 workers. The second is that the average hourly wage for those workers still earning below $6.15 has risen. In July 1999, we estimated that figure at $5.50/hour. We now estimate the figure at $5.56.

Our new estimates incorporate the effects of these two changes. We also build in assumptions about other factors affecting our cost estimates. Most significantly, we assume that the indirect ripple effect wage effects will change in a proportionate way relative to the direct wage increases. Based on our 1999 business survey, we were able to derive a figure of $7.93 billion for aggregate operating costs for all the firms that would be covered by the ordinance. We then assume that this aggregate operating cost figure remains constant to the present.

We see the effects of these factors in the bottom Row 24 of the table. In the body of this paper, we report that, for the average firm, the total cost increases of the living wage proposal would amount to 0.9 percent of such a firm's total operating budget. Our current estimate is that the total cost for the average firm will fall to 0.5 percent. This amounts to a 44 percent decline in the costs of the ordinance for the average New Orleans firm.

Because we are not working with new survey data in generating the current figures, we have not attempted to formally estimate how this cost decline for the average firm would apply to firms with varying cost structures, whether due to size, industry or other factors. But the finding we report here for the average New Orleans firm is likely to apply broadly as well. That is, holding everything else equal, the cost to most New Orleans firms of the living wage ordinance would be significantly less in 2002 that it would have been in 1999.

Table A6.
Updated Estimates Of New Orleans Living Wage Ordinance

(1)	(2) *Estimate from 1999 Study*	(3) *Estimates based on 2001 CPS data*
1) Total Workforce	293,331	291,952
2) Number of workers covered		
3) Full-time	25,477	16,203
4) Part-Time	20,341	12,937
5) Tipped	1,232	784
6) Total Workers Covered	47,050	29,924
7) Wage-only workers		
8) Average hourly wage before ordinance	$5.50	$5.56
9) Average hourly wage increase	$0.65	$0.59
10) Average number of hours/week	32.7	32.7
11) Average yearly wage increase	$1,063	$965
12) Total wage increases (lines 3+4 x line 11)	$48.7 million	$28.1million
13) Tipped workers		
14) Average hourly wage before ordinance	$2.39	$2.42
15) Average hourly wage increase	$0.69	$0.66
16) Average number of hours/week	23.3	23.3
17) Average yearly wage increase	$804	$769
18) Total wage increases (lines 5 x 17)	$1 million	$0.6 million
19) Total wage increase, all workers (lines 12 + 18)	$49.7 million	$28.7 million
20) Payroll Tax	$3.8 million	$2.2 million
21) Total Indirect "ripple effect" costs (including payroll tax)	$17.9 million	$10.3 million
22) Total Cost Increase (lines 19 + 20 + 21)	***$71.4 million***	***$41.2 million***
23) Aggregate operating cost estimate	***$7.93 billion***	***$7.93 billion***
24) Cost Increase as pct. of operating costs (lines 21/22)	***0.9%***	***0.5%***

Source: A full explanation for the estimation methodology used in this table is available from the authors

Appendix 3: Calculation of Neighborhood Multiplier Effects

This appendix details the method used to estimate the effect of raising the city-wide minimum wage on low and moderate income neighborhoods. Our analysis is based on two data sources, the detailed census tract information available in the Summary Tape File 3A (STF3A) of the Census Bureau, and the 5 percent sample of the Public Use Microdata Series. Both datasets are based on information collected during the 1990 decennial census. While more recent economic and demographic information at the census tract level would be preferable, the STF3A data are the most recent available. Thus, these calculations will not reflect demographic shifts that have taken place within the city since 1990, and should be taken as only an approximation of the present day effects on neighborhoods within the city.

Calculating the multiplier effect the calculation can usefully be divided into three parts: the determination of the number of affected workers in low and moderate income neighborhoods, the calculation of the total annual wage increase for each worker in the affected neighborhoods, and the calculation of this wage increase relative to total expenditures in neighborhood places of business. We drew on our estimates of net income increases for directly covered workers and those receiving ripple effects raises to estimate the size of wage increases. We describe below how we calculated the number of affected workers in the low and moderate income neighborhoods and the calculation of these households' income increases relative to total expenditures in these neighborhoods.

Determining the Number of Affected Workers Living in New Orleans

The first step in determining the effect of a wage increase on low and moderate income neighborhoods is identifying the number of workers who would be covered by the mandated wage increase residing in those neighborhoods, as well as those who would likely receive raises due to ripple effects. For analysis purposes, we will consider any neighborhood with an average household income less than $20,000 in 1990 as low to moderate income. In 1990 69 census tracts fell into that category. The STF3A from the Census Bureau provides information on population, workforce and other economic and demographic information at the census tract level. This allows us to determine for each census tract first what the absolute number of workers living in that tract was in 1990, second the number of workers who actually worked in the city limits, and third the mean household income of the households comprising the census tract.

Taking this information, combined with the calculation of the percentage of directly and indirectly affected workers who live and work in the city, as well as those who live and work in the city and come from households with less than $20,000 in total income, we can effectively determine the total number of affected workers who reside in low or moderate income neighborhoods, as well as these workers as a proportion of all workers from low and moderate income neighborhoods. We use the PUMS to arrive at these proportions. As will be discussed further in the next section, we divided all affected workers into eight wage categories, and apportioned the total number of workers in each category to each of the 69 census tracts. To do this we first took the number of workers who work in New Orleans from the low and moderate income census tracts as a proportion of the total number of workers working in New Orleans from all census tracts. We then took the number of affected workers in each wage category as proportion of all affected workers. Applying these proportions in tandem to the total number of affected workers, we then arrive at an estimate for the number of affected workers in each wage category from each census tract.

Wage Increase Relative to Total Expenditures in Neighborhood Businesses

To complete our analysis, we want to compare the total amount of the wage increase with the level of economic activity observed by local businesses. While neither the PUMS nor the STF3A files contain any information on business activity in the low and moderate income communities of New Orleans, we conclude that an appropriate sense of the impact can be gathered by comparing the total wage increase to the total household income in the low and moderate income communities. This assumes that the bulk of sales in neighborhood businesses come from local residents, and that the spatial expenditure patterns of households will be roughly the same for new income as it is for existing income. In addition, it is important to compare the net wage increase to the amount of money households had available for retail expenditure prior to the wage increase. This implies that essential

household expenditures, most importantly housing costs (rent, mortgage, utilities, etc.), should not be considered in these calculations, as we would expect them to change little given the magnitude of the total wage increase.

ENDNOTES

[1] See the findings from the National Research Council project summarized in Citro and Michael (1995), p. 47.

[2] Beyond simple accounting, one can also draw on either the standard Hicks-Marhall "law" of derived demand or a dynamic monopsony framework such as advanced by Card and Krueger (1995) for identifying these as the five possible paths through which covered firms in New Orleans would adjust to a higher citywide minimum wage.

[3] Some legal interpretations of the ordinance, as it was passed in February 2002, contend that sub-minimum wage workers are actually covered by the law. The final determination remains undetermined as of this writing. However, we have generated a separate set of estimates that would include the costs associated with giving raises to sub-minimum wage workers as well. These results are available from the authors.

[4] We do not have accurate figures for weeks worked by low-wage workers in New Orleans in 1998. In 1990, low-wage workers who live in poverty averaged only 38 weeks of work over the year. However, at least in part, this figure may be low since 1990 was a recession year. In any case, our assumption of a 50-week working year for low-wage workers is almost definitely high. This means that estimates of the impact of the minimum wage increase—both its costs and benefits—are also likely overstated.

[5] In our questionnaire, we did not specify a definition of "operating costs" for the responding firms. We rather allowed each firm to report a figure based on their own accounting procedures. Our general understanding of the term is that it would include all current account expenditures but would not include capital expenditures or depreciation of capital goods.

[6] Consistent with the definition used by the Small Business Administration, the Levy Institute survey defined a small business as one having no more than 500 employees.

[7] This approach builds from the well-known analysis by Elzinga and Hogarty (1973) concerning the geographic boundaries of markets, i.e. that "a market encompasses the primary demand and supply forces that determine a product's price and the geographic market area is the area that encompasses these buyers and sellers." Other authors (e.g. Benson 1980) have expanded usefully on the Elzinga and Hogarty framework, but not in ways that would affect our assignments here of alternative competitive environments. These and other useful papers on the economics of location are collected in Greenhut and Norman (1995).

[8] The HRG study also reports on a third submarket, which they call the "French Quarter." However, their figures from this market also include those of hotels outside New Orleans, so that, with this submarket, we cannot observe cleanly the distinction between hotels inside and outside New Orleans proper.

[9] Beyond this one case of the New Orleans market, researchers have consistently recognized that the elasticity of demand in the hospitality industry is relatively weak within a fairly wide band of price variation—certainly within the 1-2 percent price increases due to a living wage cost pass-through in New Orleans. See, for example, Lewis and Shoemaker (1997).

[10] According to a 1994 Food Marketing Institute survey (Miller 1994), food price was only the fourth most important factor—ranking slightly behind quality, store cleanliness and courteousness of employees—in determining where shoppers purchased food.

[11] Two studies documenting differences in food prices between different neighborhoods, racial groups, and income levels are Chung and Myers (1999) and Finke, Chern, and Fox (1997).

[12] See USDA (2000) for estimates in 1997 on food stamp participation rates. According to these estimates, between 70 –80 percent of those eligible in Louisiana utilized the program in 1997. But participation rates have fallen significantly as a result of welfare reform, as described, for example, in Revkin (2000) and Mehren (2000). This is why we report only the lower-bound participation estimate of 70 percent in the main text.

[13] The calculation is as follows: (1.5 percent food price increase) x (0.33, food as a percentage of total family budget) x (.50, food budget not covered by food stamps). Our method for deriving the average 50 percent ratio for food budget coverage through food stamps is presented in Pollin, Luce, and Brenner (1999). Note though, that a wide range of poverty researchers argue that the government's assumption that food costs absorb 1/3 of a poor family's total living expenditures is too high a figure. See Citro and Michael (1995).

[14] Appendix 4 of Pollin, Luce and Brenner (1999) explains our methodology for generating this $2 million figure in lost sales tax revenues.

[15] Though not an absolute decline in spending, since, considered in the context of a growing economy over time, overall incomes and productivity will be rising.

[16] We defined "lower income" neighborhoods as those in which average household income was below $26,000 in 1998 dollars. This figure is equal to $20,000 in 1990 dollars, 1990 being the census year from which our neighborhood income figures are derived.

[17] About 73 percent of those getting raises live in New Orleans, and of these, about 53 percent live in the lower-income neighborhoods. The $20 million net income increase takes account of changes in government subsidies after workers get their living wage increases.

TABLE 1.
WAGE INCREASES AND COSTS TO FIRMS AFTER RAISE TO $6.15

Number Of Firms Covered	**12,682**
Number Of Workers Covered	
Full-time	25,477
Part-time	20,341
Tipped workers	1,232
Total	**47,050**
Mandated Wage Increases	
Wage-only workers	
Average hourly wage before ordinance	$5.50/hr.
Average yearly wage increase	**$1,063**
(65 cent hourly increase x 32.7 hours/week)	
Tipped Workers	
Average hourly wage before ordinance	$2.39/hr.
Average yearly wage increase	**$804**
(69 cent hourly increase x 23.3 hours)	
Total Mandated Wage Increase	**$53.5 million**
(including 7.65% payroll tax)	
Ripple Effect Increases	
Total workers receiving ripple effect raises	27,314
Total ripple effect cost increases	**$17.9 million**
(including 7.65% payroll tax)	
Total Mandated And Ripple Effect Cost Increases	**$71.9 million**
Cost Increases Relative to Total Operating Budgets	
Mandated costs as percent of operating budgets	0.7%
Total Costs as percent of operating budgets	0.9%

Sources: PERI New Orleans Employment and Wages Survey, 1999; Current Population Survey Outgoing Rotation Group files 1997; Bureau of Economic Analysis 1995.

Table 2
Impact of Living Wage Ordinance by Firm Size

Firm size	Total Living Wage Costs Relative to Total Operating Costs
1 to 9 employees	0.5%
10 to 24 employees	0.5%
25 to 49 employees	0.6%
50 to 149 employees	1.0%
150 to 499 employees	0.9%
500 + employees	0.5%

Source: PERI New Orleans Employment and Wages Survey, 1999.

Table 3. Impact of Living Wage Ordinance by Industry

(1) **Industry category**	(2) **Total living wage costs relative to total operating costs**	(3) **Share of total New Orleans output**	(4) **Share of total New Orleans employment**
Eating and drinking	2.2%	2.8	6.0
Hotels and other lodging	1.7%	2.9	3.9
Business services	1.5%	2.6	5.3
Food stores	1.5%	0.9	2.5
Wholesale trade	1.5%	4.7	3.6
Personal services	0.9%	0.5	1.4
Other retail trade	0.8%	6.4	14.4
Educational services	0.8%	3.0	5.6
Transportation	0.7%	14.9	7.4
Manufacturing	0.5%	8.7	3.8
Health services	0.5%	6.2	7.5
Finance, Insurance and Real Estate	0.5%	12.3	5.5
Other services	0.4%	7.3	11.0
Construction	0.2%	4.4	4.2
Legal services	0.1%	3.7	3.2
Mining	0.0%	11.0	2.8

Source: PERI New Orleans Employment and Wage Survey, 1999; IMPLAN Pro Software package, 1996; ES-202 data for Orleans County, 1996.

Table 4. Competitive Environment for New Orleans Industries

Industry and Market Environment	Living Wage Cost/ Operating Budget
Competing outside city	
Manufacturing	0.5%
Legal services	0.1%
Mining	0.0%
Competing within city	
Eating and drinking	2.2%
Hotel and other lodging	1.7%
Personal services	0.9%
Transportation	0.7%
Construction	0.2%
Competing inside and outside city	
Business services	1.5%
Food stores	1.5%
Wholesale trade	1.5%
Other retail trade	0.8%
Educational services	0.8%
Finance, insurance and real estate	0.5%
Health services	0.5%
Other services	0.4%

Source: PERI New Orleans Employment and Wages Survey, 1999.

TABLE 5.
PRICES AND REVENUES IN NEW ORLEANS AREA HOTEL SUBMARKETS

(Averages in current dollars, 1996-2000)

	Central City Hotels	***Metairie-Airport Hotels***	***Percentage difference of Central City over Metairie-Airport***
Full-Service Hotels			
Price	$136.70	$69.30	+97.2%
Revenue per available room	$69.30	$47.10	+47.1%
Limited-Service Hotels			
Price	$97.50	$64.20	+51.9%
Revenue per available room	$67.50	$44.20	+52.7%

Source: HRG & Torto Wheaton Research, "The Single Market Hotel Outlook, New Orleans," Winter 2002.

Table 6. Personal Characteristics of Low-Wage Workers in Five Southern States, 1999

	Hourly Wage Categories (1999 dollars)		Differences between two wage categories
	(1) $5.15 – 5.64	(2) $6.15 - $6.54	(3) (column 2 – 1)
Less than high school diploma	46.0%	30.2%	-15.8%
High school diploma or GED	31.5%	38.0%	+6.5%
Some college	20.7%	25.2%	+4.5%
Bachelor's degree or more	1.9%	6.6%	+4.7%
Under 20 years of age	32.2%	13.4%	-18.8%
Average age (years)	30.6	33.9	+3.3
Female	65.5%	61.5%	-4.0%
English as second language	13.9%	20.8%	+6.9%

Source: Current Population Survey, Outgoing Rotation Group 1999
Note: In addition to Louisiana, the southern states in the sample are Alabama, Arkansas, Georgia, and Texas.

Table 7.
New Orleans Firms Grouped by Living Wage Cost/
Operating Budget Increases

Wage increase/operating budget percentage	Number of firms	Percent of firms	Average increase in living wage cost/operating budget
0%	3,294	26.5	0.0%
+ 0 - 4.9%	8,936	71.8	0.7%
5 - 9.9%	209	1.7	6.6%

Industry Profile of Firms with Cost Ratios Greater than Five Percent

Industry	Number of firms	Percent of firms	Average increase in living wage cost/operating budget
Other services	61	29.3	5.1%
Wholesale trade	55	26.4	8.8%
Other retail trade	47	22.5	5.2%
Business services	46	21.8	7.3%

Source: PERI New Orleans Employment and Wages Survey, 1999.